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(12) **United States Patent**
Majeti et al.(10) **Patent No.:** **US 6,682,722 B2**
(45) **Date of Patent:** **Jan. 27, 2004**(54) **ORAL COMPOSITIONS PROVIDING
ENHANCED OVERALL CLEANING**(75) Inventors: **Satyanarayana Majeti**, Cincinnati, OH
(US); **Niteen Vasant Bapat**, Cincinnati,
OH (US); **Paula Denise Clymer**,
Mason, OH (US); **Elizabeth Ann Reno**,
Fairfield, OH (US); **William Michael**
Glandorf, Mason, OH (US); **Stephen**
Andras Kovacs, Loveland, OH (US)(73) Assignee: **The Procter & Gamble Company**,
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U.S.C. 154(b) by 0 days.(21) Appl. No.: **10/233,880**(22) Filed: **Sep. 3, 2002**(65) **Prior Publication Data**

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2001.(51) **Int. Cl.**⁷ **A61K 7/16; A61K 7/20**(52) **U.S. Cl.** **424/53; 424/49**(58) **Field of Search** **424/49-85**(56) **References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Shep K. Rose(74) *Attorney, Agent, or Firm*—Emelyn DeLeon Hiland(57) **ABSTRACT**

Disclosed are oral care compositions and methods for overall cleaning, whitening and preventing, reducing or removing surface deposited stains on natural teeth and dental prosthesis, the compositions comprising in an orally acceptable carrier at least 0.1% by weight of a water-soluble or water-dispersible copolymer prepared by copolymerizing one or a mixture of vinyl pyrrolidone (VP) monomers with one or a mixture of C1–C19 alkyl carboxylic acid (AC) C2–C12 alkenyl ester monomers. Preferably, the compositions further comprise one or a mixture of other oral care agents selected from a water soluble alkali metal or ammonium triphosphate in an amount at least about 0.5% by weight of the composition, an abrasive, preferably a precipitated silica abrasive, in an amount at least about 6% by weight of the composition and a bleaching agent in an amount at least about 0.1% by weight of the composition. This invention further relates to methods of cleaning, whitening and polishing natural teeth and dental prosthesis and of preventing, reducing or removing surface deposited stains from teeth by administering the present compositions.

17 Claims, No Drawings